

Abstract of the Disclosure

An integrated circuit (IC) uses a current source coupled to means for current-to-voltage conversion to reject the unwanted high voltage signal and detects the wanted small voltage signal. In particular, the current source produces mirrored currents proportional to the high voltage signal, while the means for converting current-to-voltage rejects the common-mode current when there is no small signal voltage flowing through the sensing resistor. On the other hand, when the small signal voltage exists, a current flows across the sensing resistor and disturbs the balance of the current mirror. As a result, the common mode no longer exists and the means for converting current-to-voltage converts and amplifies this small signal current into a voltage proportional to the small voltage signal.